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EXAMINER	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/071,951	MUPPIDI ET AL.	
	Examiner	Art Unit	
	Shi K. Li	2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 December 2008*.

2a)☒ This action is FINAL. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *29-39* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *29-39* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claim 29 is rejected under 35 U.S.C. 102(e) as anticipated by Robidas et al. (U.S. Patent Application Pub. 2003/0031177 A1) or, in the alternative, under 35 U.S.C. 103(a) as obvious over Robidas et al. (U.S. Patent Application Pub. 2003/0031177 A1) in view of Moy (J. Moy, RFC 2178, "OSPF Version 2", IETF, July 1997).

Regarding claim 29, Robidas et al. teaches in FIG. 2 a network comprising three optical nodes. Robidas et al. teaches in paragraphs [0042] through [0045] peer discovery where each node discovers its neighbors connected to each of its trunks. Each node sends source node identification (e.g., router ID of the node) and node configuration data (e.g., optical routing parameters, port number and OSPF area ID) to its neighbor. The node receiving the parameter ensures the optical routing parameters are consistent before notifying optical routing. Robidas et al. does not expressly teach the step of publishing. However, as Robidas et al. discussed in the background of the invention section, the collection of the neighbor information is for supporting OSPF. Inherently, OSPF requires each node to broadcast neighbor information to the network.

Even if the Applicant is not convinced that the publishing step is inherently taught by Robidas et al., it would have been obvious for one of ordinary skill in the art at the time of the invention to combine Robidas et al. with OSPF. Moy documents the OSPF as an industrial standard. Moy teaches in Section 4 (page 34) that a router periodically advertises its state, which is also called link state. Link state contains link state advisement (LSA) (see page 9) which

includes neighbor information. One of ordinary skill in the art would have been motivated to combine the teaching of Moy with the optical network of Robidas et al. as suggested by Robidas et al. because the OSPF protocol identifies a traffic path having less cost (see paragraph [0002] of Robidas et al.). Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to advertise neighbor information to the network, as taught by Moy, in the optical network of Robidas et al. because the OSPF protocol identifies a traffic path having less cost.

3. Claims 29 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over deVette (U.S. Patent 6,718,141 B1) in view of Obeda et al. (U.S. Patent 6,968,131 B2).

Regarding claim 29, deVette teaches a method to determine configuration information associated with an optical network having a plurality of optical nodes coupled by optical fiber spans (col. 4, lines 31-34), the method comprising: sending identification messages to downstream neighboring nodes (col. 4, lines 40-60), each identification message including a source node identifier and node configuration data (col. 19, lines 30-40); for each node, publishing the identity of the node, the identity of its neighbors (see Table 1 in col. 14, and note also that the configuration data circulates downstream to each node; see also col. 15, lines 33-55; for detailed description of this circulation process, see col. 16, line 44 to col. 17, line 31), and the node Configuration data associated with the node (col. 4, lines 40-48; fig. 6B); and determining a network configuration consistent with the published node information (col. 4, lines 41-43). The difference between deVette and the claimed invention is that deVette sends identification messages to downstream neighboring nodes. However, deVette teaches in col. 6, lines 54-66 that while the example given in FIG. 1 and FIG. 2 discloses uni-directional propagation path,

most practical telecommunications services require bi-directional communications and a complementary network with light propagating in the opposite direction is typically installed with shared resources. To strengthen the rejection, the Examiner cites Obeda et al. for teaching bidirectional connection between nodes in an optical network. Obeda et al. teaches in FIG. 1 a network with three nodes: node A, node B and node C. It is clear from FIG. 1 that the nodes are connected such that each pair of neighbor nodes can transmit signals to each other. One of ordinary skill in the art would have been motivated to combine the teaching of Obeda et al. with the optical network of deVette because most practical telecommunications services require bi-directional communications. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide bidirectional communications between two neighbor nodes, as taught by Obeda et al., in the optical network of deVette because most practical telecommunications services require bi-directional communications.

Regarding claim 30, Obeda et al. teaches in col. 7, lines 9-11 generating alarms in the event that errors or faults are determined from the discovery topology.

4. Claims 30-31 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robidas et al. and Moy as applied to claim 29 above, and further in view of Lang et al. (Lang et al, "Link Management Protocol (LMP)", draft-ietf-mpls-lmp-0.2.txt, IETF, June 2001) and Obeda et al. (U.S. Patent 6,968,131 B2).

Robidas et al. and Moy have been discussed above in regard to claim 29. The difference between Robidas et al. and Moy and the claimed invention is that Robidas et al. and Moy do not teach protection type. Lang et al. teaches on page 11, Section 4 link property correlation. In particular, Lang et al. teaches on page 11, last paragraph that the LinkSummary message

includes protection definition and on page 49 the protection type field. One of ordinary skill in the art would have been motivated to combine the teaching of Lang et al. with the modified optical network of Robidas et al. and Moy because compatible protection scheme allows appropriate protection/restoration mechanisms to be initiated when failure is detected and customer traffic to be resumed with minimal interruption. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to exchange protection information and to accept or reject such protection information, as taught by Lang et al., in the modified optical network of Robidas et al. and Moy because compatible protection scheme allows appropriate protection/restoration mechanisms to be initiated when failure is detected and customer traffic to be resumed with minimal interruption.

The combination of Robidas et al., Moy and Lang et al. still fails to teach generating an alarm signal when an error in the network configuration has been detected. Obeda et al. teaches in col. 7 that warnings or alarms are provided to network operator in the event that errors or faults are determined from the discovery topology. One of ordinary skill in the art would have been motivated to combine the teaching of Obeda et al. with the modified optical network of Robidas et al., Moy and Lang et al. because an alarm alerts network operator to take actions for correcting the error so that the network can operate properly. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to generate alarm signal when error condition is detected, as taught by Obeda et al., in the modified optical network of Robidas et al., Moy and Lang et al. because an alarm alerts network operator to take actions for correcting the error so that the network can operate properly.

Regarding claim 34, Lang et al. teaches in Section 5 verifying link connectivity for determining incorrectly connected fibers.

5. Claims 31 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over deVette and Obeda et al. as applied to claims 29-30 above, and further in view of Lang et al. (Lang et al, "Link Management Protocol (LMP)", draft-ietf-mpls-lmp-0.2.txt, IETF, June 2001).

deVette and Obeda et al. have been discussed above in regard to claims 29-30. The difference between deVette and Obeda et al. and the claimed invention is that deVette and Obeda et al. do not teach protection type. Lang et al. teaches on page 11, Section 4 link property correlation. In particular, Lang et al. teaches on page 11, last paragraph that the LinkSummary message includes protection definition and on page 49 the protection type field. One of ordinary skill in the art would have been motivated to combine the teaching of Lang et al. with the modified optical network of deVette and Obeda et al. because compatible protection scheme allows appropriate protection/restoration mechanisms to be initiated when failure is detected and customer traffic to be resumed with minimal interruption. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to exchange protection information and to accept or reject such protection information, as taught by Lang et al., in the modified optical network of deVette and Obeda et al. because compatible protection scheme allows appropriate protection/restoration mechanisms to be initiated when failure is detected and customer traffic to be resumed with minimal interruption.

Regarding claim 34, Lang et al. teaches in Section 5 verifying link connectivity for determining incorrectly connected fibers.

6. Claims 32-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robidas et al., Moy, Lang et al. and Obeda et al. as applied to claims 30-31 above, and further in view of Au et al. (U.S. Patent 7,110,670 B1).

Robidas et al., Moy, Lang et al. and Obeda et al. have been discussed above in regard to claims 32-33. The difference between Robidas et al., Moy, Lang et al. and Obeda et al. and the claimed invention is that Robidas et al., Moy, Lang et al. and Obeda et al. do not teach determining incompatible node setting. Au et al. teaches in FIG. 1 a phonics network. Au et al. teaches in col. 3, lines 38-43 that nodes exchange control message via an optical supervisory channel (OSC). Au et al. teaches in FIG. 6 that when nodes are connected, their compatibility is determined (see step E). One of ordinary skill in the art would have been motivated to combine the teaching of Au et al. with the modified optical network of Robidas et al., Moy, Lang et al. and Obeda et al. because incompatible nodes cannot be connected together. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to determine compatibility of nodes that are connected together, as taught by Au et al., and to generate alarms if nodes are incompatible, as taught by Obeda et al., in the modified optical network of Robidas et al., Moy, Lang et al. and Obeda et al. because incompatible nodes cannot be connected together.

7. Claims 32-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over deVette and Obeda et al. as applied to claims 29-30 above, and further in view of Au et al. (U.S. Patent 7,110,670 B1).

deVette and Obeda et al. have been discussed above in regard to claims 32-33. The difference between deVette and Obeda et al. and the claimed invention is that deVette and Obeda

et al. do not teach determining incompatible node setting. Au et al. teaches in FIG. 1 a phonics network. Au et al. teaches in col. 3, lines 38-43 that nodes exchange control message via an optical supervisory channel (OSC). Au et al. teaches in FIG. 6 that when nodes are connected, their compatibility is determined (see step E). One of ordinary skill in the art would have been motivated to combine the teaching of Au et al. with the modified optical network of deVette and Obeda et al. because incompatible nodes cannot be connected together. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to determine compatibility of nodes that are connected together, as taught by Au et al., and to generate alarms if nodes are incompatible, as taught by Obeda et al., in the modified optical network of deVette and Obeda et al. because incompatible nodes cannot be connected together.

8. Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over Robidas et al. and Moy as applied to claim 29 above, and further in view of Battou et al. (U.S. Patent 7,013,084 B2).

Robidas et al. and Moy have been discussed above in regard to claim 29. The difference between Robidas et al. and Moy and the claimed invention is that Robidas et al. and Moy do not teach command to alter the optical network configuration. Battou et al. teaches in col. 43, lines 34-37 that CLI or NMS command can be used for changing configuration. One of ordinary skill in the art would have been motivated to combine the teaching of Battou et al. with the modified optical network of Robidas et al. and Moy to change the network configuration using CLI or NMS command if the current configuration is not a desired configuration because using software to configure network is fast and cost effective. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to use CLI or NMS command to

change network configuration, as taught by Battou et al., in the modified optical network of Robidas et al. and Moy because using software to configure network is fast and cost effective.

9. Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over deVette and Obeda et al. as applied to claims 29-30 above, and further in view of Battou et al. (U.S. Patent 7,013,084 B2).

deVette and Obeda et al. have been discussed above in regard to claim 29. The difference between deVette and Obeda et al. and the claimed invention is that deVette and Obeda et al. do not teach command to alter the optical network configuration. Battou et al. teaches in col. 43, lines 34-37 that CLI or NMS command can be used for changing configuration. One of ordinary skill in the art would have been motivated to combine the teaching of Battou et al. with the modified optical network of deVette and Obeda et al. to change the network configuration using CLI or NMS command if the current configuration is not a desired configuration because using software to configure network is fast and cost effective. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to use CLI or NMS command to change network configuration, as taught by Battou et al., in the modified optical network of deVette and Obeda et al. because using software to configure network is fast and cost effective.

10. Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chaudhuri et al. (U.S. Patent 7,039,009 B2) in view of Moy (J. Moy, RFC 2178, "OSPF Version 2", IETF, July 1997).

Regarding claim 36, Chaudhuri et al. teaches in FIG. 1 an optical network comprising a plurality of network nodes. Chaudhuri et al. teaches in col. 21, lines 36-40 that each node stores

information about optical lightpaths which are passing through, sourced (added) or destined (dropped) to the node. Chaudhuri et al. teaches in col. 6, lines 47-53 mediation device which, in combination of the functions of the IP router, is equivalent to administrative complex of instant claim. Chaudhuri et al. teaches in col. 21, lines 36-37 that this information is stored locally. This implies a memory for storing the provisioning data. Chaudhuri et al. teaches in col. 20, lines 58-62 neighbor discovery and the distribution of topology information to the rest of the network using standard routing algorithm (e.g., OSPF as taught in col. 7, lines 1-24). The difference between Chaudhuri et al. and the claimed invention is that Chaudhuri et al. does not teach the details of OSPF such as exchanging node identification and configuration data. Moy documents the OSPF as an industrial standard. Moy teaches in Section 7.1 (page 44) that neighbors exchange hello packets and in Section A.3.2 (page 166) the details of the hello packets which include node identification (router ID) and configuration data (e.g., neighbors). Neighbors also exchange databases about the network configuration (see Section 7.2, page 45). One of ordinary skill in the art would have been motivated to combine the teaching of Moy with the optical network of Chaudhuri et al. as suggested by Chaudhuri et al. because the OSPF protocol identifies a traffic path having minimal cost. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to advertise neighbor information to the network, as taught by Moy, in the optical network of Chaudhuri et al. Note that neither Chaudhuri et al. nor Moy expressly teaches inter-node module and configuration discovery module. However, the combination of Chaudhuri et al. and Moy teaches the functions performed by these modules and the division of hardware/software into modules is a logical concept that does not carry patentable weight.

11. Claims 37-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chaudhuri et al. and Moy as applied to claim 36 above, and further in view of Lau et al. (U.S. Patent Application Pub. 2003/0145069 A1) and Obeda et al. (U.S. Patent 6,968,131 B2).

Chaudhuri et al. and Moy have been discussed above in regard to claim 36. Regarding claim 37, the difference between Chaudhuri et al. and Moy and the claimed invention is that Chaudhuri et al. and Moy do not teach a configuration analysis module. Lau et al. teaches configuration verification. In particular, Lau et al. teaches in FIG. 6 a module for verifying network configuration with the provisioning database. One of ordinary skill in the art would have been motivated to combine the teaching of Lau et al. with the modified optical network of Chaudhuri et al. and Moy because an automated verification system discovers and reports errors so that corrective actions can be taken to ensure consistency of the configuration with the provisioning. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a verification module, as taught by Lau et al., in the modified optical network of Chaudhuri et al. and Moy because a automated verification system discovers and reports errors so that corrective actions can be taken to ensure consistency of the configuration with the provisioning.

The combination of Chaudhuri et al., Moy and Lau et al. still fails to teach an alarm generator. Obeda et al. teaches in col. 7 that warnings or alarms are provided to network operator in the event that errors or faults are determined from the discovery topology. One of ordinary skill in the art would have been motivated to combine the teaching of Obeda et al. with the modified optical network of et al., Moy and Lau et al. because an alarm alerts network operator to take actions for correcting the error so that the network can operate properly. Thus it

would have been obvious to one of ordinary skill in the art at the time the invention was made to generate alarm signal when error condition is detected, as taught by Obeda et al., in the modified optical network of et al., Moy and Lau et al. because an alarm alerts network operator to take actions for correcting the error so that the network can operate properly.

Regarding claim 38, Lau et al. teaches in FIG. 5 node identifier 502.

Regarding claim 39, Obeda et al. teaches in col. 7 that warnings or alarms are provided to network operator in the event that errors or faults are determined from the discovery topology.

Response to Arguments

12. Applicant's arguments filed 2 December 2008 have been fully considered but they are not persuasive.

The Applicant states "It is unclear just what was the basis for reopening prosecution of claims 29-39. The decision of the Board of Appeals did not indicate that further search was needed, (1211.04 Remand by Board for Further Search) nor did the Board decision indicate a new grounds of rejection (37 CFR §§41.50 Decisions and other actions by the Board).

"Yet the examiner embarked on an extensive search and reprosecution of the application instead of following the standard practice as clearly stated in the Manual of Patent Examining Procedure (MPEP) identified below:

1214.04 Examiner Reversed

The examiner should never regard such a reversal as a challenge to make a new search to uncover other and better references. This is particularly so where the application or ex parte reexamination proceeding has meanwhile been transferred or assigned to an examiner other than the one who rejected the claims leading to the appeal. The second examiner should give full faith and credit to the prior examiner's search.

"The resulting effect is that the Applicants have been prejudiced by the delay due to this piecemeal prosecution which does not follow standard office procedure and is clearly arbitrary and capricious. Applicants request that the Office Action date July 2, 2008 be withdrawn and the application passed to issue without delay."

The reopening of the prosecution of instant application is in according to 1214.04 of the MPEP.

> If the examiner has specific knowledge of the existence of a particular reference or references which indicate nonpatentability of any of the appealed claims as to which the examiner was reversed, he or she should submit the matter to the Technology Center (TC) Director for authorization to reopen prosecution under 37 CFR 1.198 for the purpose of entering the new rejection. See MPEP § 1002.02(c) and MPEP §1214.07. The TC Director's approval is placed on the action reopening prosecution.

The Examiner has not embarked for an extensive search. Instead, the use of OSPF for neighbor discovery is well known in the art. OSPF version 2 (RFC 2178) was published in 1997 and has been widely deployed over the decade. It has also been adapted as the IETF standard 54 (RFC-2328).

The Applicant argues on page 6 of the remarks:

> *In the present office action, Claim 29 is now rejected by Robidas et al. either alone or in combination with the Moy document. (Although the examiner has provided a date of July 1977 for the Moy document, there is no evidence that this document was published on that date or any other date prior to Applicants' filing date. Thus the examiner has failed to provide a prima facie case of obviousness.) The Robidas et al. published patent application fails to meet the limitations of Claim 29. The paragraphs noted in the office action, i.e. paragraphs [0042] to [0045] do not describe any of the limitations of Claim*

29. In paragraph [0044] Robidas et al. states that "[T]he SMC's Trunk Manager discovers its neighbors connected to each of its trunks and notifies Optical Routing of these trunks. Peer discovery involves having a node send its optical routing parameters and trunk identification over the in-band channel to its neighbor." Robidas does not disclose that the peer discovery parameters are ever sent and therefore does not disclose "exchanging identification messages between nodes", nor does Robidas disclose "for each node, publishing the identity of the node, the identity of its neighbors, and the node configuration data associated with the node" nor does Robidas et al. disclose "determining a network configuration consistent with the published node information." Robidas et al. simply does not disclose the method steps of Claim 29. Moy, even if it could be shown to be prior art, does cure the deficiencies of Robidas et al. Contrary to the office action's assertion in regard to link state advisement (LSA) on page 9 of Moy, there is no indication on page 9 that LSA contains neighbor information.

The arguments are not persuasive. Robidas et al. teaches in paragraph [0044] "Peer discovery involves having a node send its optical routing parameters and trunk identification over the in-band control channel to its neighbor. The node receiving the parameters ensures the optical routing parameters are consistent before notifying Optical Routing. The peer discovery parameters include chassis slot and port number, router ID of the node, OSPF area ID, Virtual Private Number of the trunk, and conduit identifiers used by the trunk." Therefore, Robidas et al. teaches "exchanging identification messages between nodes". Robidas et al. does not expressly teach the step of publishing. However, as Robidas et al. discussed in the background of the invention section, the collection of the neighbor information is for supporting OSPF.

Inherently, OSPF requires each node to broadcast neighbor information to the network. The Moy reference itself clearly indicates the date of the document. The Applicant also admits that Moy does cure the deficiencies of Robidas et al., if there are any. Moy describes in Section 12 the details of the LSA which contains neighbor information.

The Applicant argues on page 7 of the remarks:

With regard to the rejection of Claims 29 and 30 as being unpatentable over deVette in view of Obeda et al., it should be noted that on appeal, the Board had before it the patent of Elliot which was used in combination with deVette to reject other claims on the basis that Elliot taught bi-directional communication, yet the Board did not apply a new ground of rejection of Claim 29 based upon a combination of deVette and Elliot. Thus, the Board found that deVette failed to disclose exchanging information between neighboring nodes. It would not have been obvious to modify deVette to provide the exchange of information between neighboring nodes simply by adding bi-directional communication in view of Obeda.

The Examiner disagrees. The fact that deVette failed to disclose exchanging information between neighboring nodes does not imply that it is not obvious to modify deVette. deVette teaches in col. 6, lines 54-66 that while the example given in FIG. 1 and FIG. 2 discloses uni-directional propagation path, most practical telecommunications services require bi-directional communications and a complementary network with light propagating in the opposite direction is typically installed with shared resources. To strengthen the rejection, the Examiner cites Obeda et al. for teaching bidirectional connection between nodes in an optical network. Obeda et al. teaches in FIG. 1 a network with three nodes: node A, node B and node C. It is clear from FIG.

1 that the nodes are connected such that each pair of neighbor nodes can transmit signals to each other. One of ordinary skill in the art would have been motivated to combine the teaching of Obeda et al. with the optical network of deVette because most practical telecommunications services require bi-directional communications. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide bidirectional communications between two neighbor nodes, as taught by Obeda et al., in the optical network of deVette because most practical telecommunications services require bi-directional communications.

The Applicant argues on page 7 of the remarks:

With regard to the rejection of Claims 32 and 33 as being unpatentable over deVette in view of Obeda et al. and further in view of Au et al., the patent of Au et al. does not state that "the node configuration data includes a node setting" and that "the alarm signal is an incompatible node setting alarm signal" as required by Claim 32, nor does Au et al. disclose "a node parameter associated with the network configuration" and "the alarm signal is an incompatible node parameter alarm signal" as required by Claim 33. There is no specificity in Au et al., but only generalizations about determining node compatibility. The combination of references does not teach specifically node settings, node parameters or signals specific to specific types of incompatibility.

The Examiner disagrees. Au et al. teaches in FIG. 1 a phonics network. Au et al. teaches in col. 3, lines 38-43 that nodes exchange control message via an optical supervisory channel (OSC). Au et al. teaches in FIG. 6 that when nodes are connected, their compatibility is determined (see step E). One of ordinary skill in the art would have been motivated to combine

the teaching of Au et al. with the modified optical network of Robidas et al., Moy, Lang et al. and Obeda et al. because incompatible nodes cannot be connected together. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to determine compatibility of nodes that are connected together, as taught by Au et al., and to generate alarms if nodes are incompatible, as taught by Obeda et al., in the modified optical network of Robidas et al., Moy, Lang et al. and Obeda et al. because incompatible nodes cannot be connected together.

The Applicant argues on pages 7-8 of the remarks:

The rejection of Claims 30-31 and 34 depend from Claim 29 and, therefore, are allowable for at least the reasons that Claim 29 is allowable. Furthermore, the rejection based on Robidas, et al. in view of Moy and further in view of Lang et al. and Obeda is purely based on hindsight. Further, the document of Lang et al. while bearing the notation "Expiration date: September 2001; also bears the notation "Internet Draft". There is no indication that the document was actually published on September 2001 or any date prior to Applicants' filing date of February 6, 2002. Lang et al. is not specific as to what is meant by "protection definitions" or that those definitions include "incompatable node protection type" as recited in Claim 31 or "node setting" as recited in Claim 32 or "node parameter" as recited in Claim 33. Simply put, Lang et al. does not define what is meant by "protection definitions" and cannot meet the claim language. Obeda et al. does not disclose the specific alarm signal which is specifically claimed. Obeda et al. in col. 7 only refers to alarms generally, but does not teach the specific

claim language. Furthermore, it would not have been obvious to combine the disclosures to meet the specific language of the claims.

The arguments are not persuasive. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

The date information of Lang et al. reference itself clearly indicates that the document is qualified as prior art. Lang et al. indicates that the configuration data exchanges between nodes can include any protection definition. Lang et al. gives on pages 49-50 examples such as shared (M:N), dedicated (1:1) and dedicated (1+1). The terms "node setting" and "node parameter" are general terms that the teaching of Au et al. reads on these terms.

The Applicant argues on pages 8 of the remarks:

The rejection of Claims 31 and 34 depend from Claim 29 and, therefore, are allowable for at least the reasons that Claim 29 is allowable. Furthermore, the rejection based on deVette in view of Obeda and further in view of Lang et al. is purely based on hindsight. Further, the document of Lang et al. while bearing the notation "Expiration date: September 2001: also bears the notation "Internet Draft". There is no indication that the document was actually published on September 2001 or any date prior to Applicants' filing date of February 6, 2002. Lang et al. is not specific as to what is meant by

"protection definitions" or that those definitions include "incompatable node protection type" as recited in Claim 31 or "node setting" as recited in Claim 32 or "node parameter" as recited in Claim 33. Simply put, Lang et al. does not define what is meant by "protection definitions" and cannot meet the claim language. With regard to Claim 34, Lang et al. does not even discuss "incorrectly connected fibers" as required by the claim and therefore is inapplicable to Claim 34. Obeda et al. does not disclose the specific alarm signal which is specifically claimed. Obeda et al. in col. 7 only refers to alarms generally, but does not teach the specific claim language. Furthermore, it would not have been obvious to combine the disclosures to meet the specific language of the claims.

The arguments are not persuasive. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

The date information of Lang et al. reference itself clearly indicates that the document is qualified as prior art. Lang et al. indicates that the configuration data exchanges between nodes can include any protection definition. Lang et al. gives on pages 49-50 examples such as shared (M:N), dedicated (1:1) and dedicated (1+1). Regarding claims 32 and 33, the terms "node setting" and "node parameter" are general terms that the teaching of Au et al. reads on these

terms. Regarding claim 34, Lang et al. teaches in Section 5 verifying link connectivity for determining incorrectly connected fibers.

The Applicant argues on pages 9 of the remarks:

With regard to the rejection of claim 35 as being unpatentable over Robidas et al. and Moy and further in view of Battou et al., Claim 35 is dependant on Claim 29 and is patentable for the same reasons as Claim 29 and also in that there is no reasonable basis for the combination of references to meet the claimed invention since Battou et al. does not disclose issuing an error correction responsive to determining that the network configuration differs from a planned configuration. Claim 29 requires that the network configuration is obtained from the published node information. This is not disclosed by Battou et al.

The arguments are not persuasive. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

The Applicant argues on pages 9 of the remarks:

Claim 36 has been rejected based upon the combination of Chaudhuri et al. in view of Moy. The deficiencies of Moy have been discussed above and are incorporated herein by reference. The patent of Chaudhuri et al. discloses a mediation device to provide an interface between external sources and the OLXC. Chaudhuri does not disclose that the mediation device administers the optical transport complex and has a memory adapted to

receive provisioning data. Furthermore, the discounting of the claimed internode module and configuration discovery module without the application of any prior teaching should be withdrawn. For these reasons, the rejection of Claim 36 based on Chaudhuri et al and Moy must be withdrawn.

The Examiner disagrees. Chaudhuri et al. teaches in col. 24, lines 42-45 "The present invention may be implemented in hardware, software or firmware as well as Application Specific Integrated Circuits (ASICs) or Field Programmable Gate Arrays (FPGAs) or any other means by which the functions and process disclosed herein can be effectively and efficiently accomplished or any combination thereof." It is either inherently or obvious to include memory for software implementation.

The Applicant argues on pages 10 of the remarks:

Claims 37 to 39 depend from Claim 36 and, therefore, are allowable for at least the reasons that Claim 36 is allowable. Furthermore, there is no reasonable basis for the combination of Chaudhuri et al., Moy, Lau et al. and Obeda absent hindsight

The arguments are not persuasive. In response to applicant's argument that the examiner's conclusion of obviousness is based upon hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Conclusion

13. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shi K. Li whose telephone number is 571 272-3031. The examiner can normally be reached on Monday-Friday (7:30 a.m. - 4:30 p.m.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on 571 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

skl
24 February 2008

/Shi K. Li/
Primary Examiner, Art Unit 2613